

REMARKS

Claims 1 -11 are pending in the application. Claims 1, 3, 4, and 5 have been amended.

The Examiner objected to the drawings asserting that reference signs 3b and 3c addressed the incorrect areas and should be switched. Proposed amendments to Figure 1 show reference numbers 3c and 3b directed to the proper areas.

The specification has been amended to correct a typographical error. No new matter has been added.

The Examiner objected to Claims 3 -5 as containing informalities. Claims 3 - 5 have been amended to address the Examiner's concerns.

Claim 1 was rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. The antecedent basis errors identified by the Examiner have been corrected. Thus, Claim 1 is not indefinite.

Claims 1 -11 were rejected under 35 U.S.C. § 103(a) as being obvious over *Anthony* (US Patent No: 3868842) in view of *Gouiran* (FR Patent No: 2801522). US Publication No: 2003-0192358 (*Gouiran*) is the US equivalent of FR Patent No: 2801522.

Anthony discloses a method consisting of a two-step forging process, in which in a first step both ends of the tubular piece are heated to forging temperature. The tube is then placed in a first die which swages the ends partially down to size, leaving a hollow bore interiorly. Then the ends are again heated to forging temperature and the final die is applied to swage the ends to correct dimensions (See, for example, *Anthony* at col. 3, line 44 to col. 4, line 4).

Applicant respectfully asserts that the Examiner's conclusion that the process of *Anthony* is adapted to form a transition area in the form of a circumferential inclined surface of the tubular initial workpiece is not correct. The passage cited by the Examiner to support his point of view, namely column 2, last line and column 3, lines 1 - 4, only disclose that the ends 22 are either hot or cold formed. Reference 24 denoted the finished shoulder which is obtained by conventionally machining operations (See, for example, col. 3, lines 8 - 10).

Gouiran discloses a method using the steps of placing a tube in an opening matrix having an impression corresponding to the desired final external shape, inserting the end of the tube into a cavity of a shaping component, the cavity having a base, a side wall with adapted shape, and an opening opposite the base. As

described in paragraph [0038] of *Gouiran*, the jaws 4 of a die 2 have, at the face 20 of the die from which the free end 16 of tube projects, an additional groove 22, whereby the shape of this groove 22 is adapted to the deformation that is to be produced. As disclosed in paragraph [0043], the tool 8 pushes back the material of the tube 6 into the groove 22 made in the jaws 4. An outer bulge 46 is obtained by deforming the tube into the groove 22 of the jaws 4. This bulge 46 acts as a shoulder. As it is evident from Figure 4, the shoulder 46 is not substantially rectangular, as is claimed by the invention.

The Examiner asserts that it would have been obvious to one of ordinary skill in the art to substitute the radial forming/second swaging step in *Anthony's* invention for *Gouiran* machining step of orbital processing. One skilled in the art would not substitute the *Gouiran* machining step for the second swaging step because the second swaging step in *Anthony* is required for reducing the diameter of the tube. The second swaging step is not utilized for obtaining a rectangular shoulder.

Further, one skilled in the art would understand that if the machining operations of *Anthony* were substituted by the method of *Gouiran*, the desired result, namely a rectangular shoulder, would not be achieved. Thus, *Anthony* and *Gouiran*, alone or in combination, do not teach or suggest the inventive method and device.

CONCLUSION

Applicant asserts that all of the objections have been overcome, and therefore respectfully requests withdrawal of those objections, and an allowance of this application.

PETITION FOR AN EXTENSION OF THE TERM

Applicant hereby petitions for a two-month extension of the term for reply from 8 May 2006 to Monday, 10 July 2006. Submitted herewith is a check for \$225 to cover the cost of the extension. Any deficiency or overpayment should be charged or credited to Deposit Account Number 04-2219, referencing our Docket Number 14116.

Respectfully submitted,

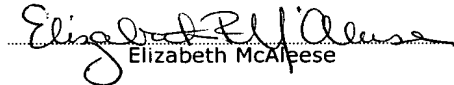


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CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class mail in an envelope addressed to: Commissioner of Patents and Trademarks, Alexandria, VA 22313-1450, on 10 July 2006.


Elizabeth McAleese